

DDAS Accident Report

Accident details

Report date: 18/05/2006	Accident number: 268
Accident time: 08:31	Accident Date: 16/11/1998
Where it occurred: Homoine Village, Homoine District, Inhambane Province	Country: Mozambique
Primary cause: Field control inadequacy (?)	Secondary cause: Field control inadequacy (?)
Class: Missed-mine accident	Date of main report: 17/11/1998
ID original source: IND 372/ADP-11	Name of source: ADP/CND/IND
Organisation: Name removed	
Mine/device: PMN AP blast	Ground condition: bushes/scrub sandy soft sparse trees
Date record created: 18/02/2004	Date last modified: 18/02/2004
No of victims: 1	No of documents: 1

Map details

Longitude:	Latitude:
Alt. coord. system: UTM 36 k	Coordinates fixed by:
Map east: 7-23-8 E	Map north: 73-55-3N
Map scale:	Map series:
Map edition:	Map sheet:
Map name:	

Accident Notes

inadequate area marking (?)
pressure to work quickly (?)
squatting/kneeling to excavate (?)
inadequate equipment (?)

Accident report

An Accident report was prepared by the demining group in the format required by the National Authorities and made available by the demining group in November 2000. The format is restrictive. The following summarises its content.

The weather at the time of the accident was "sunny, fine". The victim was born in 1964, so was around 34 years old. He had completed the basic UNUMOZ/MCTC demining course.

The demining platoon had been at the ring minefield since September 1977. The last mine found at the site had been found and destroyed in-situ on the previous Friday. All mines found at the site were at a depth between 6 and 10 cms [it is not clear whether this is the distance to the top of the mine]. The ground was soft and sandy with low metal contamination.

On Monday 16th November 1998, the deminer went into the clearance lane at 08:10 for the third time. Up to the time of the accident (08:31) he had cleared about 25 square meters, which were marked. The victim was warned to expect another mine in line with the previous find and told to be careful.

"There are clear hints that he entered the uncleared area to a length of 5.3m along the tape of the left hand side. He entered also the area where should be the next lane. The distance from the left marking (tape) to the accident place is 2.15m. The accident place could not be reached by detector from the last marked safe place in the clearance lane as well as from the cleared area. After the explosion the legs of the injured person were laying in the uncleared area. His right neighbour cleared the area around the body to have access for evacuation to a safe area where the paramedic gave first aid..." within "2-3" minutes of the accident.

The victim suffered amputation of the right leg above the knee and the left leg below the knee, traumatic amputation of the index finger of his right hand 1cm from the hand, open fractures on the third and fourth fingers of his right hand, minor wounds in his face and forearms, burns in the face and upper chest excluding the parts covered by his safety glasses.

The victim's hat, trowel, safety glasses, overalls and gloves were damaged.

The victim was driven by ambulance to hospital, arriving after 70 minutes.

It was found that the deminer had cleared 25 square metres within 20 minutes which was "a very high clearance speed". It also "appeared" that he had cleared a further 7.4 square metres without marking his work.

The victim's detector and "pruning shears" were found in the unmarked area. The crater of the mine that detonated was clearly outside the marked area. Parts of a PMN and the handle of the victim's trowel were found in the crater. The crater of the previous destroyed mine and the one in the accident were a similar size and 30cm deep.

The position of the detector was thought to imply that either the victim was on his way back to the marked area when the mine detonated or the detector was thrown in that direction by the blast. The [Schiebel] detector was not marked by the detonation. The victim's pruning shears were in the back pocket of his overalls.

The left side of the lane was properly marked but the right side not. The victim's tool roll was a meter ahead of "the safety sticks".

After the accident, the victim's hat and "the main part" of his safety glasses were found in a tree. The other part of the safety glass was found in a bush at a height of 1.8 metres.

Five minutes prior to the accident the Section Commander had visited the lane and the victim had been working inside the marked area. He told the victim to cut the bushes on the right hand side of his lane and went to check the safety distances between the lanes. The accident occurred seconds before he was scheduled to signal the deminers to change roles (resting and working). At the time of the accident no one could see the victim.

The victim confirmed that he had "cleared and marked up to the tree in front of his lane. He declared that he had got a reading by the detector and that the mine was very deep when he had hit it with a trowel".

Conclusions

"The victim entered the unmarked area with his detector and cleared about 30 square metres in 20 minutes which is an [extraordinary] speed. The average [speed] per deminer the previous week was 69 square metres per day. It may be presumed that he wanted to finish his working time with finding a mine."

The victim breached SOPs by entering the unmarked area and did not use a prodder before using his trowel. The section commander should have seen that the victim was working ahead of his marking and that his order to cut the bushes was not obeyed.

During the investigation "certain negligence" about movement on the site between rest areas was noticed.

Recommendations

Each site should have an easily understandable briefing "form" for daily and weekly briefings. Deminer refresher training should be reviewed, along with the fine system for all "levels in charge". The supervision in the field must concentrate more on the details to ensure a knowledge of safety rules, marking, cutting vegetation, use of tools, and movement on the site.

Victim Report

Victim number: 342	Name: Name removed
Age: 35	Gender: Male
Status: deminer	Fit for work: yes
Compensation: not made available	Time to hospital: 1 hour 10 minutes
Protection issued: Safety spectacles	Protection used: safety spectacles

Summary of injuries:

INJURIES

minor Arms

minor Body

minor Chest

minor Face

severe Eye

severe Hand

severe Leg

AMPUTATION/LOSS

Leg Above knee

Fingers

Eye

COMMENT

See medical report.

Medical report

A report from the Legal and Medical Safety Services of the Health Ministry at Maputo Central Hospital was made available in November 2000. It was in Portuguese and signed by Doctor [name removed] (specialist in Legal Medicine and Safety) dated 10th February 1999. The following summarises its translated content.

The victim was 35 years old.

Information on the victim

It was noted that on 16th November 1998 while doing demining work in Homoine the victim activated an anti-personnel mine, being injured on the left leg, torso and on the right arm. He did not lose consciousness at the time of the accident.

From the accident site he was taken to Chicunque Rural Hospital where he received first aid, being later transferred to Maputo Central Hospital where he was detained for approximately two months.

He suffers from anorexia, weakness and at times anxiety and depression: pain on the torso scars and the limbs; cannot use the right arm (or hand) to write or wash himself; pain on the point of amputation of the second finger and "Ankilose" on (or of) the right hand. Amputation of the distal phalange of the second finger, good quality surgical stitching; an "hypocmica" sticking (or making deep points or deep cuts) 12cm long between the phalanx of the third finger with "Ankilose" (in position of the semi-flexible "palmar" of the finger).

Right lower limb: irregular "hipocimicas" scars on the back part of the thigh.

Left leg, amputation at the upper third of the thigh. Good quality surgical stitching. "hipocmica" plate 12x6cm behind the thigh.

Legal/Medical considerations

Based on expert examination, information from the victim, the hospital and from other sources, we conclude that the patient was the victim of a work accident which resulted in traumatic injuries caused by an explosive agent - an anti-personnel mine.

Conclusions

The victim's injuries are stable.

The healing time for his injuries is 90 days.

It will take 180 days before he can work again.

50% probability that he will not work again.

Physiological incapacity 83%.

The "Pretium Deloris" is serious.

The injuries involve aesthetic problems.

The victim will not be able to work as a deminer again - other work must be found for him.

In November 2000 the victim was working as a photocopier operator at the demining group's Inhambane office.

The person who carried out an accident investigation for the National Mine Action authority (an employee of the demining group) stated that the victim had lost an eye about two months after the accident. The person was senior TA responsible for making decisions to improve the safety spectacles, and this accident was influential. His timing was uncertain and so may not conflict with the medical report where eye injury was not mentioned.

Analysis

The primary and secondary cause of this accident are listed as "*Field control inadequacy*" because the victim was breaching several SOPs and his errors were not corrected. The investigators recognised some field control problems at the site.

The demining group's failure to provide adequate PPE to their deminers is a fault that they made some effort to correct during 2001.